b) quantitatively measuring the pepsinogen-I from said serum sample using an immunoassay and comparing the value obtained to a cut-off value for pepsinogen-I selected from a range of approximately 20-30 µg/l, which overlaps the lower end of the reference range of approximately 25-120 µg/l; and

c) quantitatively measuring the gastrin-17 concentration from said serum sample by immunoassay and comparing the values obtained to a reference range of approximately 2-25 pmol/l for gastrin-17,

whereby a pepsinogen-I concentration in said serum sample below the cut-off value in combination with a gastrin-17 above the upper reference limit is indicative of atrophy of the corpus area of the stomach.

2. (Amended) A method for screening for atrophy of the mucosa of the whole stomach from blood serum, such atrophy correlating with increased risk of gastric cancer, which comprises:

a) obtaining a serum sample from a patient,

b) quantitatively measuring the pepsinogen-I from said serum sample using an immunoassay and comparing the value obtained to a cut-off value for pepsinogen-I selected from a range of approximately 20-30 µg/l, which overlaps the lower end of the reference range of approximately 25-120 µg/l; and

c) quantitatively measuring the gastrin-17 concentration from said serum sample and comparing the value obtained to a reference range of 2-25 pmol/l for gastrin-17,

whereby a pepsinogen-I concentration in said serum sample below the pepsinogen-1 cut-off value and a gastrin-17 concentration in said serum sample within the reference range for gastrin-17 is indicative of atrophy of the mucosa of the whole stomach.

3. (Amended) The method according to claim 1, 2 or 28, further comprising a protein stimulation test that measures serum gastrin-17 concentration after fasting and then after a protein rich standard meal.

4. (Amended) The method according to claim 1, 2 or 28, wherein said immunoassay is conducted with chromogenic, fluorescent or luminescent substrate and absorbance, fluorescence or luminescence is measured.

5. (Amended) The method according to claim 1, 2 or 28, wherein said immunoassay is performed using polyclonal or monoclonal antibodies which specifically bind to pepsinogen-I.

6. (Amended) The method according to claim 1, 2 or 28, wherein said immunoassay is performed using polyclonal or monoclonal antibodies which specifically bind to gastrin-17.

7. (Amended) The method according to claim 6, wherein a polyclonal antibody to gastrin-17 is obtained by immunizing an animal with the gastrin fragment 1-13, {Leu^{15}}-gastrin-17 or using a gastrin-17 antigen isolated from the stomach of an animal.

9. (Amended) The method according to claim 1, 2 or 28, further comprising an immunoassay to detect the presence of *Helicobacter pylori*.

10. (Amended) A method for screening for atrophy of the corpus area of the stomach from blood, serum or plasma, such atrophy correlating with increased risk of gastric cancer, said method comprising:

a) determining the reference range of pepsinogen-I and gastrin-17 for a population of normal individuals,

b) obtaining a blood, serum or plasma sample from a patient,

c) quantitatively measuring the pepsinogen-I concentration using an immunoassay and comparing the value obtained to a cut-off value for pepsinogen-I selected from a range that overlaps the lower end of the reference range; and

d) quantitatively measuring the gastrin-17 concentration from said sample by immunoassay and comparing it to the reference range for gastrin-17,

whereby if the pepsinogen-I concentration in said sample is decreased compared to said pepsinogen-I cut-off value and the gastrin-17 concentration in said sample is increased compared to the gastrin-17 reference range, then atrophy of the corpus area of the stomach is indicated.

11. (Amended) A method for screening for atrophy of the whole stomach from blood, serum or plasma, such atrophy correlating with increased risk of gastric cancer, said method comprising:

a) determining the reference range of pepsinogen-I and gastrin-17 for a population of normal individuals,

b) obtaining a blood, serum or plasma sample from a patient,

c) quantitatively measuring the pepsinogen-I concentration using an immunoassay and comparing the value obtained to a cut-off value for pepsinogen-I selected from a range that overlaps the lower end of the reference range; and

d) quantitatively measuring the gastrin-17 concentration from said sample by immunoassay and comparing it to the reference range for gastrin-17,

whereby if the pepsinogen-I concentration in said sample is increased compared to said pepsinogen-I cut-off value and the gastrin-17 concentration in said sample is within the gastrin-17 reference range, then atrophy of the whole stomach is indicated.

12. (Amended) The method according to claim 10, 11 or 31, further comprising measuring serum gastrin-17 concentration using a protein stimulation test that measures said concentration at the base line situation and after a protein rich standard meal.

13. (Amended) The method according to claim 10, 11 or 31, wherein the methods for detection of pepsinogen-1 and gastrin-17 concentrations are determined by absorbance, fluorescence or luminescence.

18. (Amended) The method according to claim 10, 11 or 31, further comprising determining the presence of *Helicobacter pylori*.

20. (Amended) A method for screening for atrophy of the mucosa of the whole stomach from blood serum, such atrophy correlating with increased risk of gastric cancer, which comprises:

a) obtaining a serum sample from a patient

b) quantitatively measuring the pepsinogen-I and gastrin-17 concentrations from said serum sample by immunoassay;

c) comparing the pepsinogen-I value obtained to a cut-off value selected from the range of approximately 20-30 µg/l; and

d) comparing the gastrin-17 value to a reference range of approximately of 2-25 pmol/l for gastrin-17,

whereby a pepsinogen I concentration in said serum sample below the cut-off value and a gastrin-17 concentration in the serum sample at the lower limit of the reference range is indicative of atrophy of the mucosa of the whole stomach.

21. (Amended) The method according to claim 20, further comprising a protein stimulation test that measures serum gastrin-17 concentrations after fasting and then after a protein rich standard meal.

22. (Amended) The method according to claim 20, wherein said immunoassay is conducted with chromogenic, fluorescent or luminescent substrate and absorbance, fluorescence or luminescence is measured.

Please add the following new claims:

28. (New) A method for screening for atrophy of the antrum area of the stomach from blood serum, such atrophy correlating with increased risk of gastric cancer, said method comprising:

a) obtaining a serum sample from a patient,

b) quantitatively measuring the pepsinogen-I concentration using an immunoassay and comparing the value obtained to a cut-off value for pepsinogen-I selected from the range of approximately 20-30 µg/l; and

c) quantitatively measuring the gastrin-17 concentration from said serum sample by immunoassay and comparing it to a cut-off value for gastrin-17 selected from a range of approximately 0.1-2 pmol/l,

whereby a pepsinogen-I concentration above said cut-off value in combination with a gastrin-17 concentration in said serum sample below said cut-off value is indicative of atrophy of the antrum area of the stomach.

29. (New) A method for screening for atrophy of the antrum area of the stomach from blood, serum or plasma, such atrophy correlating with increased risk of gastric cancer, said method comprising:

a) obtaining a serum sample from a patient; and

b) quantitatively measuring the gastrin-17 concentration from said serum sample by immunoassay and comparing it to a cut-off value for gastrin-17 selected from a range of approximately 0.1-2 pmol/l,

whereby a gastrin-17 concentration in said serum sample below said cut-off value is indicative of atrophy of the antrum area of the stomach.

30. (New) A method for screening for atrophy of the corpus of the stomach from blood, serum or plasma, such atrophy correlating with increased risk of gastric cancer, said method comprising:

a) obtaining a blood, serum or plasma sample from a patient;

b) quantitatively measuring the pepsinogen-I from said sample using an immunoassay and comparing the value obtained to a cut-off value for pepsinogen-I selected from a range of approximately 20-30 µg/l, which overlaps the lower end of the pepsinogen-I reference range of approximately 25-120 µg/l ; and

c) quantitatively measuring the gastrin-17 concentration from serum sample by immunoassay and comparing the values obtained to a reference range of approximately of 2-25 pmol/l for gastrin-17,

whereby a pepsinogen-I concentration in said sample below the pepsinogen-I cut-off value in combination with a gastrin-17 above the upper gastrin-17 reference limit is indicative of atrophy of the corpus area of the stomach.

31. (New) A method for screening for atrophy of the antrum area of the stomach from blood, serum or plasma, such atrophy correlating with increased risk of gastric cancer, said method comprising:

a) determining the reference range of pepsinogen-I and gastrin-17 for a population of normal individuals,

b) obtaining a blood, serum, or plasma sample from a patient,

c) quantitatively measuring the pepsinogen-I concentration using an immunoassay and comparing the value obtained to a cut-off value for pepsinogen-I selected from a range that overlaps the lower end of the pepsinogen-I reference range; and

d) quantitatively measuring the gastrin-17 concentration from said sample by immunoassay and comparing it to a cut-off value for gastrin-17 selected from the gastrin-17 reference range,

whereby if the pepsinogen I concentration in said sample is increased compared to said pepsinogen-I cut-off value and the gastrin-17 concentration in said sample is decreased compared to said gastrin-17 cut-off value, then atrophy of the antrum area of the stomach is indicated.

32. (New) A method for screening for atrophy of the mucosa of the whole stomach from blood, serum or plasma, such atrophy correlating with increased risk of gastric cancer which comprises:

a) obtaining a blood, serum or plasma sample from a patient,

b) quantitatively measuring the pepsinogen-I from said sample using an immunoassay and comparing the value obtained to a cut-off value for pepsinogen-I selected from a range of approximately 20-30 µg/l, which overlaps the lower end of the reference range of approximately 25-120 µg/l; and

c) quantitatively measuring the gastrin-17 concentration from said sample and comparing the value obtained to a reference range of 2-25 pmol/l for gastrin-17,

whereby a pepsinogen-I concentration in said sample below the pepsinogen-1 cut-off value and a gastrin-17 concentration in said serum sample within the reference range for gastrin-17 is indicative of atrophy of the mucosa of the whole stomach.